

WHAT IS CLAIMED IS:

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1. An Internet facsimile gateway device  
connected to a telecommunication network and the  
Internet, comprising;

an image-information transmitting unit that  
10 transmits image information included in an electronic  
mail message to a facsimile device when said Internet  
facsimile gateway device receives said electronic mail  
message requesting image-information transmission to the  
facsimile device;

15 a delivery-confirmation-mail creating unit  
that creates a delivery-confirmation mail message  
notifying a result of the image-information transmission  
after the image-information transmission by said  
Internet facsimile gateway device is completed, if said  
20 electronic mail message requests said Internet facsimile  
gateway device to transmit the delivery-confirmation  
mail message to an original address of said electronic  
mail message; and

a delivery-confirmation-mail transmitting unit  
25 that transmits the delivery-confirmation mail message to

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the original address of said electronic mail message.

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2. The Internet facsimile gateway device as claimed in claim 1, wherein:

the delivery-confirmation mail message is regulated by a DSN; and

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the delivery-confirmation-mail creating unit creates the delivery-confirmation mail message regulated by the DSN notifying a successful image transmission after the image-information transmission by said Internet facsimile gateway device is succeeded, if said electronic mail message requests said Internet facsimile gateway device to transmit the delivery-confirmation mail message regulated by the DSN notifying the successful image transmission to the original address of said electronic mail message.

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3. The Internet facsimile gateway device as claimed in claim 1, wherein:

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the delivery-confirmation mail message is regulated by the DSN; and

the delivery-confirmation-mail creating unit that creates the delivery-confirmation mail message

5 regulated by the DSN notifying a failed image transmission after the image-information transmission by said Internet facsimile gateway device is failed, if said electronic mail message requests said Internet facsimile gateway device to transmit the delivery-

10 confirmation mail message regulated by the DSN notifying the failed image transmission to the original address of said electronic mail message.

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4. The Internet facsimile gateway device as claimed in claim 1, wherein:

the delivery-confirmation mail message is

20 regulated by a MDN; and

the delivery-confirmation-mail creating unit that creates the delivery-confirmation mail message regulated by the MDN notifying the successful image transmission after the image-information transmission by

25 said Internet facsimile gateway device is succeeded, if

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said electronic mail message requests said Internet facsimile gateway device to transmit the delivery-confirmation mail message regulated by the MDN notifying the successful image transmission to the original address of said electronic mail message.

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10           5.     The Internet facsimile gateway device as claimed in claim 1, wherein:

              the delivery-confirmation mail message is regulated by the MDN; and

              the delivery-confirmation-mail creating unit

15     creates the delivery-confirmation mail message regulated by the MDN notifying the failed image transmission after the image-information transmission by said Internet facsimile gateway device is failed, if said electronic mail message requests said Internet facsimile gateway

20     device to transmit the delivery-confirmation mail message regulated by the MDN notifying the failed image transmission to the original address of said electronic mail message.

6. The Internet facsimile gateway device as claimed in claim 1, wherein the delivery-confirmation mail message further comprising a first extension field that indicates a total number of pages transmitted to the facsimile device.

10 7. The Internet facsimile gateway device as claimed in claim 1, wherein the delivery-confirmation mail message further comprising a second extension field that indicates a communication charge for transmitting the image information to the facsimile device.

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8. The Internet facsimile gateway device as claimed in claim 1, wherein the delivery-confirmation mail message further comprising a third extension field that indicates a time at which the image-information transmission is completed.

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9. The Internet facsimile gateway device as claimed in claim 1, wherein the telecommunication network is a general switched telephone network GSTN.

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10. The Internet facsimile gateway device as claimed in claim 1, wherein the telecommunication network is an analog public network PSTN, and the facsimile device is a G3 facsimile device.

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11. The Internet facsimile gateway device as claimed in claim 1, wherein the telecommunication network is an integrated services digital network ISDN, and the facsimile device is a G4 facsimile device.

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12. The Internet facsimile gateway device as claimed in claim 1, wherein said deliveryconfirmation-

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mail creating unit creates the delivery-confirmation  
mail message that notifies the result of the image-  
information transmission, said result including  
reception ability information of the facsimile device  
5 received therefrom, after the image-information  
transmission by said Internet facsimile gateway device  
is completed if said electronic mail message requests  
said Internet facsimile gateway device to transmit the  
delivery-confirmation mail message to the original  
10 address of said electronic mail message.

15 13. The Internet facsimile gateway device as  
claimed in claim 12, wherein the telecommunication  
network is an analog public network PSTN, and the  
facsimile device is a G3 facsimile device.

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14. The Internet facsimile gateway device as  
claimed in claim 13, wherein the reception ability  
25 information of the G3 facsimile device is a content of a

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signal DIS (Digital Identification Signal) notified therefrom.

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15. The Internet facsimile gateway device as claimed in claim 13, wherein the reception ability information of the G3 facsimile device is a content of a  
10 signal NSF (Non-Standard Facilities) notified therefrom.

15 16. The Internet facsimile gateway device as claimed in claim 13, wherein the reception ability information of the G3 facsimile device is a content of a  
signal JM notified therefrom.

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17. The Internet facsimile gateway device as claimed in claim 13, wherein the reception ability  
25 information of the G3 facsimile device is information

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about a function to connect to the Internet in a case  
that the G3 facsimile device includes the function to  
connect to the Internet.

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18. The Internet facsimile gateway device as  
claimed in claim 17, wherein the reception ability  
10 information of the G3 facsimile device includes a  
content of a signal CSA notified therefrom.

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19. The Internet facsimile gateway device as  
claimed in claim 12, wherein the telecommunication  
network is an integrated services digital network ISDN,  
and the facsimile device is a G4 facsimile device.

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20. The Internet facsimile gateway device as  
25 claimed in claim 19, wherein the reception ability

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information of the G4 facsimile device is a content of a signal RDCLP notified therefrom.

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21. An Internet facsimile gateway device connected to a telecommunication network and the Internet, comprising:

10 an image-information transmitting unit that transmits image information included in an electronic mail message to a facsimile device when said Internet facsimile gateway device receives said electronic mail message requesting image-information transmission to the  
15 facsimile device;

a first-delivery-confirmation-mail creating unit that creates a first delivery-confirmation mail message notifying a successful transmission of said electronic mail message to said facsimile device, after  
20 receiving said electronic mail message if said electronic mail message requests said Internet facsimile gateway device to transmit the delivery-confirmation mail message to an original address of said electronic mail message;

25 a first-delivery-confirmation-mail

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transmitting unit that transmits the first delivery-confirmation mail message to the original address of said electronic mail message;

5 a second-delivery-confirmation-mail creating unit that creates a second delivery-confirmation mail message notifying a result of the image-information transmission by said Internet facsimile gateway device to the facsimile device after said image-information transmission; and

10 a second-delivery-confirmation-mail transmitting unit that transmits the second delivery-confirmation mail message to the original address of said electronic mail message.

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22. The Internet facsimile gateway device as claimed in claim 21, wherein:

20 the first delivery-confirmation mail message is regulated by a DSN;

the second delivery-confirmation mail message is regulated by the DSN; and

the second-delivery-confirmation-mail creating  
25 unit creates the second delivery-confirmation mail

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message regulated by the DSN notifying a successful  
image transmission after the image-information  
transmission by said Internet facsimile gateway device  
is succeeded, if said electronic mail message requests  
5 said Internet facsimile gateway device to transmit the  
delivery-confirmation mail message regulated by the DSN  
notifying the successful image transmission to the  
original address of said electronic mail message.

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23. The Internet facsimile gateway device as  
claimed in claim 21, wherein:

15 the first delivery-confirmation mail message  
is regulated by the DSN;

the second delivery-confirmation mail message  
is regulated by the DSN; and

the second-delivery-confirmation-mail creating  
20 unit that creates the second delivery-confirmation mail  
message regulated by the DSN notifying a failed image  
transmission after the image-information transmission by  
said Internet facsimile gateway device is failed, if  
said electronic mail message requests said Internet  
25 facsimile gateway device to transmit the delivery-

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confirmation mail message regulated by the DSN notifying the failed image transmission to the original address of said electronic mail message.

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24. The Internet facsimile gateway device as claimed in claim 21, wherein:

10 the first delivery-confirmation mail message is regulated by a MDN;

the second delivery-confirmation mail message is regulated by the MDN; and

15 the second-delivery-confirmation-mail creating unit that creates the second delivery-confirmation mail message regulated by the MDN notifying the successful image transmission after the image-information transmission by said Internet facsimile gateway device is succeeded, if said electronic mail message requests  
20 said Internet facsimile gateway device to transmit the delivery-confirmation mail message regulated by the MDN notifying the successful image transmission to the original address of said electronic mail message.

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25. The Internet facsimile gateway device as claimed in claim 21, wherein:

the first delivery-confirmation mail message is regulated by the MDN;

5 the second delivery-confirmation mail message is regulated by the MDN; and

the second-delivery-confirmation-mail creating unit creates the second delivery-confirmation mail message regulated by the MDN notifying the failed image transmission after the image-information transmission by  
10 said Internet facsimile gateway device is failed, if said electronic mail message requests said Internet facsimile gateway device to transmit the delivery-confirmation mail message regulated by the MDN notifying  
15 the failed image transmission to the original address of said electronic mail message.

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26. The Internet facsimile gateway device as claimed in claim 21, wherein the telecommunication network is a general switched telephone network GSTN.

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27. The Internet facsimile gateway device as claimed in claim 21, wherein the telecommunication network is an analog public network PSTN, and the facsimile device is a G3 facsimile device.

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28. The Internet facsimile gateway device as claimed in claim 21, wherein the telecommunication network is an integrated services digital network ISDN, and the facsimile device is a G4 facsimile device.

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29. A method of controlling an Internet facsimile gateway device, comprising the steps of:

connecting to a telecommunication network and the Internet;

transmitting image information included in an electronic mail message to a facsimile device when receiving said electronic mail message requesting image-information transmission to the facsimile device;

creating a delivery-confirmation mail message

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notifying a result of the image-information transmission after completing the image-information transmission, if said electronic mail message requests said Internet facsimile gateway device to transmit the delivery-

5 confirmation mail message to an original address of said electronic mail message; and

transmitting the delivery-confirmation mail message to the original address of said electronic mail message.

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30. The method of controlling the Internet facsimile gateway device as claimed in claim 29, wherein the delivery-confirmation mail message is regulated by a DSN, said method comprising the step of creating the delivery-confirmation mail message regulated by the DSN notifying a successful image transmission after the image-information transmission by said Internet facsimile gateway device is succeeded, if said electronic mail message requests said Internet facsimile gateway device to transmit the delivery-confirmation mail message regulated by the DSN notifying the successful image transmission to the original address of

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said electronic mail message.

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31. The method of controlling the Internet facsimile gateway device as claimed in claim 29, wherein the delivery-confirmation mail message is regulated by the DSN, said method comprising the step of creating the  
10 delivery-confirmation mail message regulated by the DSN notifying a failed image transmission after the image-information transmission by said Internet facsimile gateway device is failed, if said electronic mail message requests said Internet facsimile gateway device  
15 to transmit the delivery-confirmation mail message regulated by the DSN notifying the failed image transmission to the original address of said electronic mail message.

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32. The method of controlling the Internet facsimile gateway device as claimed in claim 29, wherein  
25 the delivery-confirmation mail message is regulated by a

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MDN, said method comprising the step of creating the delivery-confirmation mail message regulated by the MDN notifying the successful image transmission after the image-information transmission by said Internet

5 facsimile gateway device is succeeded, if said electronic mail message requests said Internet facsimile gateway device to transmit the delivery-confirmation mail message regulated by the MDN notifying the successful image transmission to the original address of  
10 said electronic mail message.

15 33. The method of controlling the Internet facsimile gateway device as claimed in claim 29, wherein the delivery-confirmation mail message is regulated by the MDN, said method comprising the step of creating the delivery-confirmation mail message regulated by the MDN  
20 notifying the failed image transmission after the image-information transmission by said Internet facsimile gateway device is failed, if said electronic mail message requests said Internet facsimile gateway device to transmit the delivery-confirmation mail message  
25 regulated by the MDN notifying the failed image

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transmission to the original address of said electronic mail message.

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34. The method of controlling the Internet facsimile gateway device as claimed in claim 29, wherein the telecommunication network is a general switched telephone network GSTN, said method comprising the step of connecting to the general switched telephone network GSTN and the Internet.

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35. The method of controlling the Internet facsimile gateway device as claimed in claim 29, wherein the telecommunication network is an analog public network PSTN, and the facsimile device is a G3 facsimile device, said method comprising the steps of:

connecting to the analog public network PSTN and the Internet; and

exchanging the image information with the G3 facsimile device through the connected analog public

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network PSTN.

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36. The method of controlling the Internet facsimile gateway device as claimed in claim 29, wherein the telecommunication network is an integrated services digital network ISDN, and the facsimile device is a G4 facsimile device, said method comprising the steps of:

10 connecting to the integrated services digital network ISDN and the Internet; and

exchanging the image information with the G4 facsimile device through the connected integrated

15 services digital network ISDN.

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37. The method of controlling an Internet facsimile gateway device as claimed in claim 29, said method comprising the step of creating the delivery-confirmation mail message that notifies the result of the image-information transmission, said result

25 including reception ability information of the facsimile

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device received therefrom, after completing the image-  
information transmission if said electronic mail message  
requests said Internet facsimile gateway device to  
transmit the delivery-confirmation mail message to the  
5 original address of said electronic mail message.

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10 38. A method of controlling an Internet  
facsimile gateway device, comprising the steps of:  
connecting to a telecommunication network and  
the Internet;  
transmitting image information included in an  
15 electronic mail message to a facsimile device after  
receiving said electronic mail message requesting image-  
information transmission to the facsimile device;  
creating a first delivery-confirmation mail  
message notifying a successful transmission of said  
20 electronic mail message to said facsimile device, after  
receiving said electronic mail message if said  
electronic mail message requests said Internet facsimile  
gateway device to transmit the delivery-confirmation  
mail message to an original address of said electronic  
25 mail message;

transmitting the first delivery-confirmation  
mail message to the original address of said electronic  
mail message;

creating a second delivery-confirmation mail  
5 message notifying a result of the image-information  
transmission by said Internet facsimile gateway device  
to the facsimile device after said image-information  
transmission; and

transmitting the second delivery-confirmation  
10 mail message to the original address of said electronic  
mail message.

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39. The method of controlling the Internet  
facsimile gateway device as claimed in claim 38, wherein  
the first delivery-confirmation mail message is  
regulated by a DSN, and the second delivery-confirmation  
20 mail message is regulated by the DSN, said method  
comprising the step of creating the second delivery-  
confirmation mail message regulated by the DSN notifying  
a successful image transmission after the image-  
information transmission by said Internet facsimile  
25 gateway device is succeeded, if said electronic mail

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message requests said Internet facsimile gateway device  
to transmit the delivery-confirmation mail message  
regulated by the DSN notifying the successful image  
transmission to the original address of said electronic  
5 mail message.

10                   40. The method of controlling the Internet  
facsimile gateway device as claimed in claim 38, wherein  
the first delivery-confirmation mail message is  
regulated by the DSN, and the second delivery-  
confirmation mail message is regulated by the DSN, said  
15 method comprising the step of creating the second  
delivery-confirmation mail message regulated by the DSN  
notifying a failed image transmission after the image-  
information transmission by said Internet facsimile  
gateway device is failed, if said electronic mail  
20 message requests said Internet facsimile gateway device  
to transmit the delivery-confirmation mail message  
regulated by the DSN notifying the failed image  
transmission to the original address of said electronic  
mail message.

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20                    42. The method of controlling the Internet  
facsimile gateway device as claimed in claim 38, wherein  
the first delivery-confirmation mail message is  
regulated by the MDN, and the second delivery-  
confirmation mail message is regulated by the MDN, said  
25 method comprising the step of creating the second



delivery-confirmation mail message regulated by the MDN  
notifying the failed image transmission after the image-  
information transmission by said Internet facsimile  
gateway device is failed, if said electronic mail

5 message requests said Internet facsimile gateway device  
to transmit the delivery-confirmation mail message  
regulated by the MDN notifying the failed image  
transmission to the original address of said electronic  
mail message.

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43. The method of controlling the Internet  
15 facsimile gateway device as claimed in claim 38, wherein  
the telecommunication network is a general switched  
telephone network GSTN, said method comprising the step  
of connecting to the general switched telephone network  
GSTN and the Internet.

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44. The method of controlling the Internet  
25 facsimile gateway device as claimed in claim 38, wherein

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the telecommunication network is an analog public network PSTN, and the facsimile device is a G3 facsimile device, said method comprising the steps of:

connecting to the analog public network PSTN  
5 and the Internet; and

exchanging the image information with the G3 facsimile device through the connected analog public network PSTN.

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45. The method of controlling the Internet facsimile gateway device as claimed in claim 38, wherein  
15 the telecommunication network is an integrated services digital network ISDN, and the facsimile device is a G4 facsimile device, said method comprising the steps of:

connecting to the integrated services digital network ISDN and the Internet; and

20 exchanging the image information with the G4 facsimile device through the connected integrated services digital network ISDN.

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